(d) *Fire pumps.* (1) The ECC must include control of the main machinery space fire pumps.

(2) Remote control of a required fire pump must be provided from the navigating bridge. Where one or more fire pumps is required to be independent of the main machinery space, at least one such pump must be controlled from the navigating bridge.

(e) *Flooding safety.* (1) Machinery space bilges, bilge wells, shaft alley bilges, and other minimally attended locations where liquids might accumulate must be monitored from the ECC to detect flooding angles from vertical of up to 15° heel and 5° trim.

(2) The ECC must include the controls necessary to bring at least one independent bilge pump and independent bilge suction required by §56.50–50(e) of this chapter into operation to counter flooding.

(3) Where watertight doors in subdivision bulkheads are required in the machinery spaces, they must be Class 3 watertight doors and must be controllable from the ECC and the required navigating bridge control location.

(4) Controls must be provided to operate the sea inlet and discharge valves required by §56.50–95(d) of this chapter and the emergency bilge suction required by §56.50–50(f). These controls must be arranged to allow time for operation in the event of flooding with the vessel in the fully loaded condition. Time considerations must include detection, crew response, and control operation time.

(f) *Communications.* (1) A means must be provided at the ECC to selectively summon any engineering department member from the engineering accommodations to the ECC.

(2) The voice communications system required by §113.30–5(a) of this chapter must also include the engineering officers' accommodations.

(g) *Electrical systems.* (1) The ECC must include the controls and instrumentation necessary to place the ship service and propulsion generators in service in 30 seconds.

(2) The main distribution and propulsion switchboards and generator controls must either be located at the ECC, if the ECC is within the boundaries of the main machinery space, or the controls and instrumentation required by part 111 of this chapter must be duplicated at the ECC. Controls at the switchboard must be able to override those at the ECC, if separate. Also see §111.12–11(g) and §111.30–1 regarding switchboard location.

(h) *Maintenance program.* (1) The vessel must have a planned maintenance program to ensure continued safe operation of all vital systems. Program content and detail is optional, but must include maintenance and repair manuals for work to be accomplished by maintenance personnel and checkoff lists for routine inspection and maintenance procedures.

(2) The planned maintenance program must be functioning prior to the completion of the evaluation period for reduced manning required by §62.50–1(b)(5).

(3) Maintenance and repair manuals must include details as to what, when, and how to troubleshoot, repair and test the installed equipment and what parts are necessary to accomplish the procedures. Schematic and logic diagrams required by §62.20–1 of this part must be included in this documentation. Manuals must clearly delineate information that is not applicable to the installed equipment.

[CGD 81–030, 53 FR 17838, May 18, 1988; 53 FR 19090, May 26, 1988; 53 FR 24270, June 28, 1988; USCG–2004–18884, 69 FR 58346, Sept. 30, 2004]

§62.50–30 Additional requirements for periodically unattended machinery plants.

NOTE: Periodically unattended machinery plants include machinery plants and spaces that are automated to the degree that they are self-regulating and self-monitoring and could safely be left periodically unattended. Emphasis is placed on providing systems that act automatically until the crew can take action in the event of a failure or emergency. Requirements are in addition to those of a minimally attended machinery plant.

(a) *General.* The requirements of this section must be met in addition to those of §62.50–20 of this part.

(b) *Automatic transfer.* Redundant vital auxiliaries and power sources must automatically transfer to the backup units upon failure of operating units.

(c) *Fuel systems.* The fuel service and treatment system(s) must meet section

41.77.1 of the American Bureau of Shipping's ''Rules for Building and Classing Steel Vessels.''

(d) *Starting systems.* Automatic or remote starting system receivers, accumulators, and batteries must be automatically and continuously charged.

(e) *Assistance-needed alarm.* The engineer's assistance-needed alarm (see subpart 113.27 of this chapter) must annunciate if—

(1) An alarm at the ECC is not acknowledged in the period of time necessary for an engineer to respond at the ECC from the machinery spaces or engineers' accommodations; or

(2) An ECC alarm system normal power supply fails.

(f) *Remote alarms.* ECC alarms for vital systems that require the immediate attention of the bridge watch officer for the safe navigation of the vessel must be extended to the bridge. All ECC alarms required by this part must be extended to the engineers' accommodations. Other than fire or flooding alarms, this may be accomplished by summarized visual alarm displays.

(g) *ECC alarms.* All requirements of this part for system or equipment monitoring must be met by providing both displays and alarms at the ECC.

(h) *Fire control station.* A control station for fire protection of the machinery spaces must be provided outside the machinery spaces. At least one access to this station must be independent of category A machinery spaces, and any boundary shared with these spaces must have an A–60 fire classification as defined in §72.05 of this chapter. Except where such an arrangement is not possible, control and monitoring cables and piping for the station must not adjoin or penetrate the boundaries of a category A machinery space, uptakes, or casings. The fire control station must include—

(1) Annunciation of which machinery space is on fire;

(2) Control of a fire pump required by this chapter to be independent of the main machinery spaces;

(3) Controls for machinery space fixed gas fire extinguishing systems;

(4) Control of oil piping positive shutoff valves located in the machinery spaces and required by §56.50–60(d);

(5) Controls for machinery space fire door holding and release systems, skylights and similar openings;

(6) The remote stopping systems for the machinery listed in §111.103 of this chapter; and

(7) Voice communications with the bridge.

(i) *Oil leakage.* Leakages from high pressure fuel oil pipes must be collected and high levels must be alarmed at the ECC.

(j) *Maintenance program.* The maintenance program of §62.50–20(h) must include a checkoff list to make sure that routine daily maintenance has been performed, fire and flooding hazards have been minimized, and plant status is suitable for unattended operation. Completion of this checkoff list must be logged before leaving the plant unattended.

(k) *Continuity of electrical power.* The electrical plant must meet sections 41.75.1 and 41.75.3 of the American Bureau of Shipping's ''Rules for Building and Classing Steel Vessels'' and must—

(1) Not use the emergency generator for this purpose;

(2) Restore power in not more than 30 seconds; and

(3) Account for loads permitted by §111.70–3(f) of this chapter to automatically restart.

[CGD 81–030, 53 FR 17838, May 18, 1988; 53 FR 19090, May 26, 1988]

PART 63—AUTOMATIC AUXILIARY BOILERS

Subpart 63.01—General Provisions

Sec.

Subpart 63.05—Reference Specifications

Subpart 63.10—Miscellaneous Submittals

Subpart 63.15—General Requirements